

## 2.2.2 Parkinson's disease (*Kampavāta/ Vepathu*)

### Introduction

Parkinson's disease is a degenerative disorder. It is the most common extra-pyramidal crippling disease affecting the older adults. It is a syndrome consisting of classical triad of resting tremor, bradykinesia and rigidity<sup>7</sup>. This triad does not include the equally important gait and postural stability problems which also constitutes the syndrome. It is a disease of elderly and its prevalence increases from 1% in people over the age of 65 years to 5% in people over the age of 80 years and affects men and women equally<sup>8</sup>. The disease has insidious onset and is slowly progressive leading to severe morbidity in advanced age. A disease condition '*vepathu*' described in *Ayurveda* may also be correlated with Parkinson's disease. Generalized involuntary movements of all parts of the body or of the head only, is known as *vepathu*. It is caused by vitiated *vāta*. So '*vātahara*' treatment should be given to these patients.

### Aetiology

Although aetiology of the disease not well known but the following factors contribute in the pathogenesis of this disease

1. Genetic factors
2. Accelerated ageing
3. Environmental toxins (methyl-phenyl tetra hydro pyridine- MPTP) and other toxins (manganese, carbon monoxide and methanol)
4. Increased free radical and iron content in the Substantia Nigra
5. Drugs - Reserpine, Ethanol, Lithium, Diltiazem etc.
6. Neurodegenerative disorders such as multi system atrophy, Alzheimer's disease etc.
7. Post infections (viral encephalitis etc.)
8. Brain tumor
9. Repeated head injury (in boxing)

### Pathogenesis

Parkinsonism is caused by degeneration of pigmented neurons (Dopaminergic neuron) in the zona compacta of substantia nigra, resulting decrease of dopamine levels in the brain which leads to motor dysfunctions viz. resting tremor, bradykinesia and rigidity.



## Clinical features

1. Resting tremor
2. Bradykinesia
3. Rigidity
4. Stooped posture
5. Masked face
6. Pill rolling movements
7. Lack of postural adjustment
8. Festinating gait
9. Drooping of saliva due to infrequent swallowing movements
10. Monotonous soft voice
11. Absence of arm swing while walking
12. Aches and pain in body

## Complications

1. Frequent falls
2. Incapacitation
3. Depressions and dementia
4. Postural hypotension
5. Urinary incontinence
6. Constipation
7. Aspiration

## Investigations

There are no confirmatory tests available, diagnosis is commonly made on clinical grounds. The following investigations may help in the diagnosis.

1. CT Scan
2. MRI Scan



3. Positron-Emission Tomography (PET)
4. Levadopa drug challenge test

### Differential Diagnosis

1. Drug induced Parkinson
2. Depression
3. Essential tremor
4. Normal pressure hydrocephalous
5. Cerebral hypoxia
6. Carbon monoxide poisoning

### Management approaches

#### a. Prevention

1. Use *śali* (old rice), *godhūma* (wheat), citrus fruit, vegetable, nuts, milk and milk products, *dāḍīma* (pomegranate), *nimbu* (lemon), mango, orange, guava, apple, peach, garlic, asafoetida, sprout etc.
2. Practice regular aerobic exercises
3. Take balance diet
4. Consume anti-psychotics or any other medication under close supervision of doctor
5. Be as active as possible
6. Avoid *yava* (barley), peas, *pūga* (areca nut), *jambu* (jamun), excess protein diet, hot spicy food and incompatible food article.

#### b. Medical management

#### Line of treatment

1. ***Nidāna parivarjana* (avoidance of aetiological factors)** - Modifiable causative factors like environmental toxins, drugs, head injuries, infections should be avoided.
2. ***Samśodhana cikitsā*** (Bio-cleansing therapies) followed by ***Śamana cikitsā*** (Palliative therapy) should be advocated.



- i. **Snehana (Oleation):** Gentle massage with medicated oils such as:
- *Mahā nārāyaṇa taila*
  - *Kṣīrabalā taila*
  - *Sahacarādi taila*
  - *Dhānvantara taila*
  - *Mahāmāṣa taila*
  - *Balā taila*
  - *Aśvagandhā taila*
- ii. **Sarvāṅga sveda** (Steam bath) / *Patrapīṇḍa sveda* for 3-7 days
- iii. **Mātrā Vasti** with *Sahacarādi taila* 50 ml with *Saindhava lavaṇa* (Q.S.) and *Śatapuspā* (Q.S.) daily for 15-21 days
- iv. **Nasya karma/ Bṛṃhaṇa nasya** with *Purāṇa ghṛta* (old ghī)/ *Nārāyaṇa taila* / *Kṣīra balā taila* 8-8 drops in both nostrils for 7 days
- v. **Śirovasti** with medicated oils (*Kṣīrabalā taila*, *Mahāmāṣa taila*, *Mahā nārāyaṇa taila*, *Brāhmītaila*) daily 45 minutes for 7 days
- vi. **Śirodhārā** with medicated liquids (milk/water)/ oils (*Kṣīrabalā taila*, *Mahāmāṣa taila*, *Mahā nārāyaṇa taila*, *Brāhmītaila*) daily 45 minutes for 7 days.

### 3. Drug therapy

#### SINGLE DRUGS

Drug	Dosage (per dose)	MOA <sup>s</sup> /Vehicle	Duration*
<i>Aśvagandhā (Withania somnifera</i> Dunal) <i>cūrṇa</i>	3-5 gm	Milk	15 days
<i>Kappikacchu bīja (Mucuna pruriens</i> Linn.) <i>cūrṇa</i>	5-10 gm	After meal with milk	15 days
<i>Pārasīka yavānī (Hyoscyamus niger</i> L.) <i>cūrṇa</i>	1-3 gm	Warm water	15 days
<i>Balā (Sida cordifolia</i> Linn.) <i>cūrṇa</i>	5 gm	Milk	15 days



<i>Rasona (Allium sativum Linn.) Kṣīra pāka</i>	30-50ml	Water/ milk	15 days
<i>Brāhmī (Bacopa monnieri Linn.) svarasa</i>	5-10 ml	Water	15 days

### COMPOUND FORMULATIONS

Drug	Dosage (per dose)	MOA <sup>s</sup> /Vehicle	Duration*
<i>Daśamūla kvātha</i>	10-20ml	Water	15 days
<i>Brāhmī vaṭī</i>	250-500mg	Water	15 days
<i>Siṃhanāda guggulu</i>	1-1.5 gm	Warm water	15 days
<i>Vātāri guggulu</i>	1-1.5 gm	Warm water	15 days
<i>Koñca bīja pāka</i>	5-10 gm	Milk/ water	15 days
<i>Brāhma rasāyana</i>	10 gm	milk	15 days
<i>Balāriṣṭa</i>	12-24 ml	Water	15 days
<i>Aśvagndhāriṣṭa</i>	12-24 ml	Water	15 days
<i>Daśamūlāriṣṭa</i>	12-24 ml	Water	15 days
<i>Kṣīrabalā taila</i>	External use	-	15 days
<i>Mahāmāṣa taila</i>	External use	-	15 days
<i>Mahā nārāyaṇa taila</i>	External use	-	15 days
<i>Sahacarādi taila</i>	External use	-	15 days
<i>Brāhmītaila</i>	External use	-	15 days
<i>Dhānvantara taila</i>	External use	-	15 days
<i>Caturbhujā rasa</i>	125-250 mg	<i>Triphalā kvātha/ honey</i>	15 days

<sup>s</sup> MOA - Mode of administration

\* Initially 2 times in a day after meal for 15 days followed by condition of patient and physician's direction.

**NOTE:** Out of the drugs mentioned above any one of the drug or in the combination may



be prescribed by the physician. The duration of the treatment may vary from patient to patient. Physician should decide the dosage (per dose) and duration of the therapy based on the clinical findings and response to therapy.

**c. Yogic Practices-** The following *yogic* practices are beneficial in Parkinson's disease; however, these should be performed only under the guidance of qualified *Yoga therapist*. Duration should be decided by the *Yoga therapist*.

1. Practice of *Prāṇāyāma* (*Anuloma viloma, Nāḍīśuddhi, Bhrāmarī*) and meditation along with the practice of *Yama* and *Niyama*
2. *Āsanās* to correct the postural imbalances, weight bearing postures to manage the tremors
3. Deep relaxation technique and *Yoga Nidrā*

**Counselling** - Advice/ inform the patient to

1. The nature of illness
2. Maintain good physical and mental health
3. Practice exercise regularly
4. Be active
5. Take diet rich in fibers, antioxidants and vitamins
6. Limit protein intake
7. Limit intake of manganese and Vitamin B<sub>6</sub>
8. Avoid stress and anxiety
9. Avoid constipation

### Indications for referral

1. Advanced Parkinson's disease and associated complications
2. Severe Dyskinesia
3. Life threatening concurrent illness



## COSTING DETAILS

### Approx. costing of Parkinson's disease Management

S.No.	Medicine	Requirement	Unit	Rate in Rs.	Cost in Rs.
1.	<i>Aśvagandhā cūrṇa</i>	90-150	gm	0.48	44-88
2.	<i>Pārasīka yavānī cūrṇa</i>	150	gm	1.0	150
3.	<i>Balā cūrṇa</i>	150	gm	0.5	75
4.	<i>Koñca bīja cūrṇa</i>	30-60	gm	0.5	15-30
5.	<i>Brāhmī svarasa</i>	150-300	ml	0.75	113-226
6.	<i>Rasona Kṣīra pāka</i>	150-300	ml	0.5	75-150
7.	<i>Daśamūla kvātha</i>	300-600	ml	0.76	228-456
8.	<i>Brāhmī vaṭī</i>	7.5-15	gm	4.4	34-68
9.	<i>Simhanāda guggulu</i>	30-45	gm	1.34	41-60
10.	<i>Vātārī guggulu</i>	30-45	gm	1.67	52-75
11.	<i>Kōñca bīja pāka</i>	150-300	gm	1.0	150-300
12.	<i>Brāhma rasāyana</i>	300	gm	0.197	60
13.	<i>Balāriṣṭa</i>	375-750	ml	0.24	90-180
14.	<i>Aśvagndhāriṣṭa</i>	375-750	ml	0.43	162-324
15.	<i>Daśamūlāriṣṭa</i>	375-750	ml	0.2	75-150
16.	<i>Kṣīrabalā taila</i>	200	ml	0.7	140
17.	<i>Mahāmāṣa taila</i>	200	ml	0.68	136
18.	<i>Mahā nārāyaṇa taila</i>	200	ml	1.28	256
19.	<i>Sahacarādi taila</i>	200	ml	0.76	152
20.	<i>Brāhmītaila</i>	200	ml	0.29	57
21.	<i>Dhānvantara taila</i>	200	ml	0.41	82
22.	<i>Caturbhujā rasa</i>	3.75-7.5	gm	150	563



**Approx. costing of Pañcakarma procedure in Parkinson's disease \*\***

S.No.	Pañcakarma procedure	Days	Rate in Rs./ day	Cost in Rs.
1.	<i>Snehana</i> (externally)	21	200	4200
2.	<i>Sarvāṅga sveda</i>	3-7	150	450-1050
3.	<i>Patrapīṇḍa sveda</i>	3-7	200	600-1400
4.	<i>Matrā vasti</i>	15-21	100	1500-2100
5.	<i>Nasya karma</i>	7	100	700
6.	<i>Śirovasti</i>	7	300	2100
7.	<i>Śirodhārā</i> (oils)	7	300	2100
8.	<i>Śirodhārā</i> (milk)	7	150	1050

